

**APPENDIX B.**  
**EXAMPLE STORM WATER POLLUTION**  
**PREVENTION PLAN**

# **STORM WATER POLLUTION PREVENTION PLAN**

Prepared for:

Anytown Good Neighbor Development Corporation

## **PICKLE CREEK PLAZA PHASE 1**

Any County, Tennessee

Prepared by:

**ABC, Inc.**

April 2001

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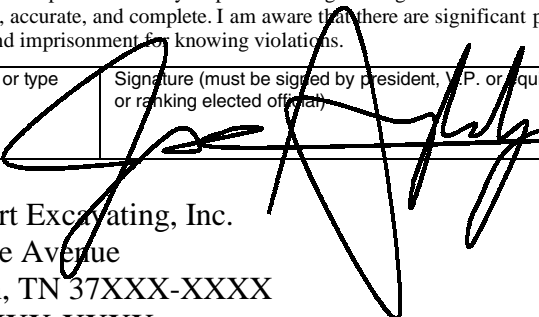
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## General Information

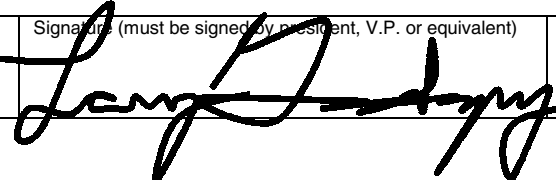
This Storm Water Pollution Prevention Plan (SWPPP) is developed in accordance with the Tennessee General NPDES Permit (TNR100000) for Storm Water Discharges Associated with Construction Activity (TNCGP), and is prepared using sound engineering practices. ABC, Inc. personnel involved with the development of this plan have completed the *Design of Vegetative and Structural Measures for Erosion Prevention and Sediment Control* course available from the State of Tennessee.

As instructed by Part III.F of the TNCGP, this plan and all attachments are hereby submitted to the local Environmental Assistance Center (EAC), along with the complete, correctly signed Notice of Intent (NOI). Construction will not be initiated prior to 30 days from the date of submittal of this document, or prior to receipt of a Notice of Coverage (NOC) from the Tennessee Department of Environment and Conservation (TDEC).

Owner/Developer: Anytown Good Neighbor Development Corporation  
459 Some Road, Suite 306  
Anytown, TN 37XXX-XXXX  
(XXX) XXX-XXXX  
contact person: Joe Anybody – Executive Director  
email: janybody23@agndc.com

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		
Representative of owner/developer and title; print or type	Signature (must be signed by president, V.P. or equivalent, or ranking elected official)	Date
Joe Anybody, Executive Director		4/25/01

Primary Contractor: Move Dirt Excavating, Inc.  
345 Some Avenue  
Anytown, TN 37XXX-XXXX  
(XXX) XXX-XXXX  
contact person: Larry Goodguy – Owner  
email: lg4567@aol.com

I certify under penalty of law that I have reviewed this document and any attachments. Based on my inquiry of the construction site owner/developer identified above, and/or my inquiry of the person directly responsible for assembling this Storm Water Pollution Prevention Plan, I believe the information submitted is accurate. I am aware that this Plan, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements.		
Company name of primary contractor; print or type	Signature (must be signed by president, V.P. or equivalent)	Date
Move Dirt Excavating, Inc.		4/25/01

The individual responsible for installation, maintenance, and inspections of erosion and sediment control measures will be Joe Smith of Move Dirt Excavating, Inc. Mr. Smith has completed the *Fundamentals of Erosion Prevention and Sediment Control* course offered by the State of Tennessee. Mr. Smith's mobile telephone number is (123) 456-7890.

Current versions of this SWPPP, the NOI, and the NOC will be kept on the site for the duration of the project. These items will be available for the use of all operators and site personnel involved with erosion and sediment controls, and be available to TDEC personnel visiting the site. A notice will be posted near the construction entrance during Phase 1, and then near both entrances during Phases 2 and 3, containing a copy of the NOC with the tracking number assigned by the EAC, the name and telephone number of a contact person for the development, and a brief description of the project.

Prior to initiating earthwork on the areas described as Phase 2 or 3, ABC, Inc. will provide additional information to TDEC in support of this document. Phase-specific plan drawings will be created at that time.

Any new contractor on the project that has any responsibility to install, inspect, or maintain erosion or sediment control measures will sign the contractor's certification on a copy of the NOI (Appendix A) and will submit it to the local EAC. Any correspondence with TDEC or any EAC will reference the tracking number assigned by TDEC to the project. ABC, Inc. will submit a Notice of Termination (NOT; Appendix B) after the complete installation and successful establishment of the final stabilization activities at the site.

It is the intention and goal of the TNCGP and this SWPPP that any discharge from the property described in this document have no objectionable color contrast to the water body that receives it. The construction activity will be carried out in such a manner as will prevent any discharge that would cause a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of the waters on the property or downstream of the property for fish and aquatic life, livestock watering and wildlife, recreation, irrigation, navigation, or industrial or domestic water supply.

This plan may be amended for reasons described below, or for other reasons. When the plans are revised, the contractor will implement the changes to erosion protection and sediment controls within 48 hours after the need for modification is identified.

## **Existing Site Conditions**

The property consists of 70 acres of rolling woodland in northeast Any County. The property lies between Nashville Hwy (US 44) and Tennessee Avenue (US 19) and has additional access from Center Street. County soil surveys indicate that the soils present within the construction area of Phase 1 are in the Craven, Uchee, and Emporia series. These series consist of deep, well-drained soils exhibiting moderate erosivity. Typically, the surface layer of this series is dark grayish brown fine sandy loam about 4 inches deep. The subsurface layer is pale brown loam about 5 inches thick. The subsoil is reddish gray and typically extends to a depth of 42 to 67 inches. Detailed soil boundary information can be found on the Drainage/Soil Map (MP-2). Shales with high carbonate content of the Johns Creek formation underlie the area. No acid-producing material should be encountered during the construction. No sinkholes or other injection wells were observed during investigation of the site.

Three wet-weather conveyances are located on Phase 1 of the property and flow eastward into Pickle Creek. At the confluence of two of the conveyances and Pickle Creek there is a wetland of approximately 0.65 acre in size. The wetland is hydrologically connected to the stream. This information was confirmed by a site visit conducted by Mr. Joe Schmoe of the Tennessee Division of Water Pollution Control on 1/1/2001, and outlined in a letter by Mr. Schmoe dated 1/11/2001. Approximately 12 acres of the property lie to the west of the stream. Around 30 acres lie north of another tributary on the east side of Pickle Creek. The remaining 28 acres lie south and east of the streams. The **Pickle Creek Plaza** project covers 60 of the 70 acres. The 10 acres of the property not involved in the project will be developed at a later date into a city park and will protect the streams and wetland with buffers and provide the public with walking paths and recreational and educational opportunities.

## **Project Description**

The project will provide building space for future business tenants. Retail shops and professional offices will be available within the development. XX00 linear feet of new roadway (Pickle Street and Pepper Boulevard) will provide access to the site from US 19 and US 44 and from Center Street. The new roads will be constructed with the intention of becoming City of Anytown public roads, and will be built to meet those requirements. XXXXXX square feet of office space will occur in eight individual two-story wood-framed buildings constructed during Phase 1. XXXXXX square feet of retail space will be available in three single-story structures built in Phases 2 and 3. XXXX parking spaces will be provided per City of Anytown requirements. The parking areas will constitute XXXXXX square feet of total area. *Special Pave* paving system will be used in some areas of Phase 2 and 3 to reduce impervious surface and provide infiltration of precipitation back into the ground. Detention basins will be constructed to serve as temporary sediment retention basins until the site is fully stabilized. The basins will then be modified to serve as storm water detention ponds to satisfy City of Anytown requirements. Utilities will be constructed within the right-of-way of, and at the same time as, the construction of the access roads through the site.

Road crossings of each of the two streams will be constructed during Phase 2 of the project. The construction of Phase 1 of Pickle Street is designed so that it can be extended across Pickle Creek with a clear span bridge during Phase 2. ABC, Inc. will

prepare an application for an Aquatic Resource Alteration Permit (ARAP) for the road crossing prior to the initiation of Phase 2. Due to the availability of utilities from Center Street and from US 19, there should be no need to cross the stream with any utility lines. If it is determined later to be necessary to cross the stream with utility lines, notification will be made to the local EAC by ABC, Inc.

Additional fill material from off of the property or off-site disposal of excess material is not anticipated in the grading plan of Phase 1. Should a need be determined later, it is the responsibility of the contractor to contact ABC, Inc. to revise this SWPPP to include those areas. If the new area is used solely by the project outlined in this plan, the new area is considered to be a part of this project, and the erosion prevention and sediment control at that location will also be the responsibility of the contractor.

### **303(d) Special Requirements**

Discharges from the project enter Pickle Creek, which is 303(d) listed as being impaired by sediment. According to Part III.F. of the TNCGP, this plan and all attachments is being submitted to the local EAC, along with the completed NOI. In addition, inspections will be performed by qualified personnel before anticipated storm events (or series of storm events such as intermittent showers over one or more days), within 24 hours after the end of a storm event of 0.5 inches or greater, and at least once per week. Inspections will cover, at a minimum, all disturbed areas that have not undergone final stabilization, sediment control structures, outfall points, and the stream. The inspections will be conducted with the purpose of determining whether erosion prevention and sediment control measures are effective in preventing impacts to receiving waters. If during these inspections it is discovered that repair or maintenance is required of any temporary or permanent control measure, the action taken to correct the problem will be documented.

If the controls are installed and maintained correctly but are found to provide an inadequate level of protection, ABC, Inc. will make revisions to this plan and these revisions will be implemented by the contractor. The inspector will certify on a weekly basis (on the form found in Appendix C) that the inspection described above has been performed and whether or not all of the erosion and sediment control measures are installed and in working order. The record of certifications on the form will be submitted to the local EAC by the 15<sup>th</sup> of the month following the end of the quarter. Quarters are January – March, April – June, July – September, and October – December. The inspector will maintain a rain gage and a daily log of readings.

### **Runoff Calculations**

Natural Resource Conservation Service TR-55 method was used to estimate pre- and post-development runoff. The calculations indicate that there will be a net increase in runoff coefficient and in peak discharge as a result of the project. Therefore, the sediment basins will be converted to use as storm water detention basins for post-construction control. Post-development runoff curve number will be 83 and the peak discharge will be 17.6 cfs during the design storm. Worksheets for the TR-55 calculations are found in Appendix E.

### **Safe Dams Act Information**

The sediment basins in use on Phase 1 of this project do not meet the definition of 'dams' as found in Chapter 1200-5-7 of the Rules of the Department of Environment and Conservation, Division of Water Supply, concerning the Safe Dams Act of 1973. Therefore, no certificate is required for the construction of the basins.

### **Spills and Non-Storm Water Contingencies**

All fueling of equipment and vehicles on site will be conducted near the construction entrance/staging area off of Center Street. Any spillage will be removed immediately. Contaminated soils will be placed on heavy plastic and covered or placed into approved containers to prevent contact with storm water. All fuel tanks will be in the containment area. Oils, other vehicle fluids, paints, and solvents will be stored in the construction trailer. Any spill in excess of two gallons will be reported to a representative of Move Dirt Excavating, Inc.

**If a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period, the contractor will immediately notify the permittee who shall then do the following: notify the National Response Center (NRC) (800-424-8802) and the Tennessee Emergency Management Agency (TEMA) (emergencies: 800-262-3300; non-emergencies: 800-262-3400); as well as the local Environmental Assistance Center.** Also, ABC, Inc. will prepare a revision of this document to identify measures to prevent the reoccurrence of such releases.

Concrete trucks will wash out at the designated area near the construction entrance. Each contractor is responsible to provide litter control for trash generated by his crew. A dumpster for garbage will be located near the construction trailer and is limited to garbage and paper trash only. Paint cans, oil cans, used oil, and filters will be contained and disposed of by the contractor by taking them to the Any County Hazardous Waste Disposal Center on Division Road.

### **Phasing of Construction**

Clearing, grading, and construction on the 60 acres will be accomplished in three phases. Phase 1 consists of 10 acres of disturbance, and includes the construction of the west office buildings, supporting utilities, and parking, along with the installation of Pickle Street to a point just west of Pickle Creek. This SWPPP has been developed and submitted for Phase 1 construction. Phase 2 constitutes the construction of the retail and office complex on the northeastern portion of the property, including all parking areas, utility installation, and road crossings over Pickle Creek and its tributary; and encompasses 28 acres of disturbance. Phase 3 will be the construction of the building complex and associated improvements located on the southeastern part of the project. Phase 3 covers the remaining 22 acres of disturbed area of the project. Phase 1 will be completed and stabilized to the extent possible before the initiation of Phase 2. Phase 2 will be completed, including landscaping, and any remaining bare soils stabilized prior to the initiation of Phase 3.



## **Sequencing of Phase 1**

1. The site plan incorporates a streamside buffer zone to help protect the quality of the riparian area and prevent pollution to the streams. High-visibility safety fencing will be installed as indicated on the Structural Control Plan (MP-3) to indicate the boundary of the buffer zone. Care will be utilized to prevent the operation of equipment within, or otherwise disturbing the buffer zone. The same safety fencing will be used to identify trees to be protected on other parts of the property as well. ABC, Inc. will survey the limits of clearing and mark this boundary with flagging tape.
2. Since the area of Phase 1 drains away from the street, temporary sediment barriers will be installed down slope of this disturbance and moved further down slope as the ground-disturbing activity is extended toward the creek. All erosion prevention and sediment control best management practices identified in this SWPPP will be installed as recommended in the Tennessee Erosion and Sediment Control Handbook.
3. Land-disturbing activity at the project site will begin with the installation of the construction entrance/exit and the staging/equipment storage area off of Center Street. Due to the high traffic use of Center Street, a truck wash will be installed for the use of any vehicles leaving the site. The truck wash will recycle the wash water and will be self-contained so that no water can escape to the street or toward the stream.
4. After the exit has been constructed, work will commence to salvage any valuable timber from the property. The logger is a graduate of the Tennessee Division of Forestry's Master Logger Program and will not cut any trees within the streamside buffer zone.
5. Construction of sediment basins #1 and #2, including slope drains and outfall structures, will be completed and they will be functional prior to any further grade work. The basins incorporate a two stage design to slow down the storm water and drop out larger soil particles. These areas will also allow easy clean out of any built up sediment deposits. Diversion ditches and berms will be constructed as needed to divert any runoff from the active construction areas into the basins.
6. Diversion ditches will be constructed at the north and south margins of the property to divert any storm waters coming from off the site around the future construction area. Topsoil stripped for the footprint of the basins and storage areas will be used to construct the berms.
7. Seeding and mulching or other stabilization measure as identified per the Stabilization Plan (Appendix D) will occur after final grade is achieved at the basins and diversions, and before any further disturbance of the site. Slope drains will be used to convey storm water from the construction areas down slope to the sediment basins.
8. Topsoil in the area of the new road and parking areas will be removed next and stockpiled and immediately seeded per the Stabilization Plan (Appendix D). Construction of the roadbed, parking, primary utilities, sidewalks, shoulders, and permanent storm sewer system will be initiated at this time. The catch basins for the storm sewers will be sealed off from storm water until gravel subgrade or pavement is applied to the road and parking. Clearing and

grubbing will be kept to the minimum necessary to accomplish the grade work of this phase.

9. Work on the road and parking lots will progress until the point some durable surface is applied to these areas and the utilities and shoulders are at final grade and stabilized before disturbance of the building sites is initiated.
10. Storm drain inlet protection will be installed when the permanent system is in place and functioning.
11. Cut and fill activities to prepare the portion of the property for construction of the office buildings will progress at this point. Clearing and grubbing will be kept to the minimum necessary to accomplish the grade work of this phase.
12. It is anticipated that all fill material necessary to achieve proposed grades in the area of Phase 1 can be acquired within the area of Phase 1.
13. Sediment will be removed from sediment traps, silt fences, sedimentation ponds, and other sediment controls before the design capacity of the structure has been reduced by 50%. Litter, construction debris, and construction chemicals exposed to storm water will be picked up prior to anticipated storm events (e.g. forecasted by local weather reports), or otherwise prevented from becoming a pollutant source for storm water discharges (e.g., screening outfalls, daily pick-up, etc.). After use, silt fences will be removed or otherwise prevented from becoming a pollutant source for storm water discharges. Temporary measures may be removed at the beginning of the workday, but will be replaced at the end of the workday.
14. Stabilization will be accomplished as soon as practicable after attainment of final grade and no later than seven days after attaining final grade. Where earth-disturbing activity has temporarily ceased, temporary stabilization will be applied within seven days if the activity will not resume within 15 days. The dates when major grading activities occur, the dates when construction activities temporarily or permanently cease on a portion of the site, and the dates when stabilization measures are initiated will be recorded and maintained on the site. Stabilization methods are outlined in the Stabilization Plan (Appendix D) and may include seed and mulch, or seed and erosion control blankets as identified on the Final Structures Plan (MP-4).
15. Phase 1 will be completed and stabilized to the extent possible before the initiation of Phase 2. At this point, all disturbed area will drain to the sediment basins only. Any unstable areas near the streams that will not drain to the basins will be stabilized before proceeding any further.

## **Appendix A**

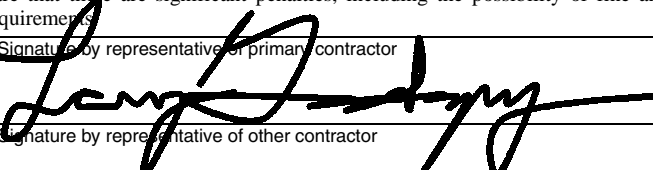
### **Notice of Intent**



**CONSTRUCTION ACTIVITY – STORM WATER DISCHARGES  
NOTICE OF INTENT (NOI)**

<b>Name of the construction project (site)</b> <b>Pickle Creek Plaza – Phase 1</b>		<b>County/(ies)</b> <b>Any County</b>	<b>Existing NPDES Permit No.</b> (if site is already permitted) <b>TNR</b>
<b>Street address (or description of location) and nearest city</b> <b>Located between Nashville Hwy (US 44) and Tennessee Avenue (US 19) near Center Street in Anytown.</b> <input checked="" type="checkbox"/> Map attached (required)		<b>Latitude</b> <b>37.3375</b>	<b>Longitude</b> <b>-83.34583</b>
<b>Construction project (site) description</b> <b>The construction of retail shops and professional offices along with all supporting parking roadways, utilities, and storm water systems.</b> <b>Area to be disturbed (acres): Phase 1 = 10, Phase 2 = 28, Phase 3 = 22, Total = 60</b>		<b>Start date</b> <b>June 1, 2001</b>	<b>Estimated end date</b> <b>August 31, 2003</b>
<b>Construction site owner/developer:</b> legal name and mailing address, including zip code <b>Anytown Good Neighbor Development Corporation</b> <b>459 Some Road, Suite 306</b> <b>Anytown, TN 37XXX-XXXX</b>		<b>Contact person, phone number and e-mail address</b> <b>Joe Anybody</b> <b>(123) 456-0987</b> <b>janybody23@agndc.com</b>	
<b>Name(s) of stream(s), wetland(s), lake(s) or other waters of the state receiving storm water runoff from the construction site</b> <b>Pickle Creek and tributaries</b>			
<b>Do there appear to be streams</b> <input checked="" type="checkbox"/> <b>and/or wetlands</b> <input checked="" type="checkbox"/> <b>on the construction site?</b> <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b>			
<b>If an Aquatic Resource Alteration Permit (ARAP) has been obtained for this site, provide the permit number. In application</b>			
<b>Has the Storm Water Pollution Prevention Plan (SWPPP) been developed?</b> <input checked="" type="checkbox"/> <b>Yes</b> <input type="checkbox"/> <b>No</b>			
<b>Note that the NOI will be considered incomplete if you answered "No" to the above question. Submit the NOI when the SWPPP is developed.</b>			
<b>Permit Application Certification and Signature</b> (must be signed by President, Vice-President or equivalent, or ranking elected official)			
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.			
<b>Representative of owner/developer; print or type</b> <b>Joe Anybody – Executive Director</b>	<b>Signature</b> 	<b>Date</b> <b>4/25/01</b>	

**Certification for Contractor(s)** (must be signed by President, Vice President or equivalent, or ranking elected official)

I certify under penalty of law that I have reviewed this document, any attachments, and the SWPPP referenced above. Based on my inquiry of the construction site owner/developer identified above, and/or my inquiry of the person directly responsible for assembling this Notice of Intent, I believe the information submitted is accurate. I am aware that this NOI, if approved, makes the above-described construction activity subject to NPDES permit number TNR100000, and that certain of my activities on-site are thereby regulated. I am aware that there are significant penalties, including the possibility of fine and imprisonment for knowing violations, and for failure to comply with these permit requirements.		
<b>1. Company name of primary contractor; print or type</b> <b>Move Dirt Excavating, Inc.</b>	<b>Signature by representative of primary contractor</b> 	<b>Date</b> <b>4/25/01</b>
<b>2. Company name of other contractor; print or type</b>	<b>Signature by representative of other contractor</b>	<b>Date</b>
<b>3. Company name of other contractor; print or type</b>	<b>Signature by representative of other contractor</b>	<b>Date</b>

**OFFICIAL STATE USE ONLY**

<b>Received Date</b>	<b>EAC</b>	<b>Permit Number</b> <b>TNR</b>	<b>Reviewer</b>	<b>Notice of Coverage Date</b>
303d Receiving Stream	High Quality Water	Threatened and Endangered Aquatic Fauna		

## CONSTRUCTION ACTIVITY – STORM WATER DISCHARGES NOTICE OF INTENT (NOI) - INSTRUCTIONS

Purpose of this form. A completed Notice of Intent (NOI) must be submitted to obtain coverage under the Tennessee General NPDES Permit for discharges of storm water associated with construction activity. This permit is required for storm water discharge(s) from construction sites that involve grubbing, clearing, grading or excavation of five or more acres of land. This form should be submitted at least 30 days prior to the start date of any land disturbing activities such as grubbing, clearing, grading or excavation.

Notice of Coverage. The Division will process your application and return to you a Notice of Coverage (NOC). Runoff from the construction site will not be permitted until the Division has prepared this NOC.

Completing the form. Type or print clearly, using ink and not markers or pencil. Answer each item or enter “NA,” for not applicable, if a particular item does not fit the circumstances or characteristics of your construction site or activity. If you need additional space, attach a separate piece of paper to the NOI form.

Who must submit the NOI form? The NOI form must be signed by the “operator(s)” of the construction site. Operators will most likely include the developer of the site, and the primary contractor(s). “Operator” means any party associated with the construction project that meets either of the following two criteria: (1) the party has operational control over project specifications (including the ability to make modifications in specifications); or (2) the party has day-to-day operational control of those activities at a project site which are necessary to ensure compliance with the storm water pollution prevention plan or other permit conditions (e.g., they are authorized to direct workers at the site to carry out activities identified in the storm water pollution prevention plan or comply with other permit conditions). If a contractor has not been identified at the time the NOI is submitted by the developer, the contractor(s) must submit a separate NOI in order to obtain authorization under this permit. The contractor must include the NPDES permit number that is already assigned to the site, along with the name of the construction project and its location.

Describe and locate the project. Use the legal or official name of the construction site. If a construction site lacks street name or route number, give the most accurate geographic information available to describe the location (reference to adjacent highways, roads and structures; e.g. intersection of state highways 70 and 100). Latitude and longitude of the center of the site can be located on USGS quadrangle maps. The quadrangle maps can be obtained at 1-800-USA-MAPS, or at the Census Bureau Internet site: <http://www.census.gov/cgi-bin/gazetteer>. Attach a copy of a portion of a 7.5 minute quad map, showing location of site, with boundaries at least one mile outside the site boundaries. Provide estimated starting date of clearing activities and completion date of the project, and an estimate of the number of acres of the site on which soil will be disturbed, including borrow areas, fill areas and stockpiles.

Give name of the receiving stream. Trace the route of storm water runoff from the construction site and determine the name of the river(s), stream(s), creek(s), wetland(s), lake(s) or any other water course(s) into which the storm water runoff drains. Note that the receiving water course may or may not be located on the construction site. If the first water body receiving construction site runoff is unnamed (“unnamed tributary”), determine the name of the water body which the unnamed tributary enters.

ARAP permit may be required. If your work will disturb or cause alterations of a stream or wetland, you must obtain an appropriate Aquatic Resource Alteration Permit (ARAP). If you have a question about the ARAP program or permits, contact your local Environmental Assistance Center.

You must prepare a Storm Water Pollution Prevention Plan (SWPPP) prior to submitting the NOI.

Submitting the form and obtaining more information. Note that this form must be signed by the company President, Vice-President, or a ranking elected official in the case of a municipality. For more information, contact your local Environmental Assistance Center at the toll-free number 1-888-891-8332 (TDEC). Submit the completed NOI form to the appropriate EAC below (call the toll-free number to determine), addressed with **Attention: Storm Water NOI Processing**.

### Environmental Assistance Centers(EACs) - Division of Water Pollution Control - Addresses

EAC Office	Street Address	Zip Code	EAC Office	Street Address	Zip Code
Memphis	2510 Mt. Moriah Road STE E-645	38115-1520	Cookeville	1221 South Willow Ave.	38506
Jackson	362 Carriage House Drive	38305-2222	Chattanooga	540 McCallie Avenue STE 550	37402-2013
Nashville	711 R S Gass Boulevard	37206	Knoxville	2700 Middlebrook Pike STE 220	37921
Columbia	2484 Park Plus Drive	38401	Johnson City	2305 Silverdale Road	37601

## **Appendix B**

### **Notice of Termination**

To be completed and submitted to the local EAC when all construction and stabilization activities have been completed and stabilization measures are effective, or if an operator's responsibilities at this site have ended.



**NOTICE OF TERMINATION (NOT) – STORM WATER DISCHARGES  
CONSTRUCTION ACTIVITY**

The purpose of this form is to notify the Tennessee Department of Environment and Conservation that you, as a permitted operator of storm water discharges from a construction activity, no longer have responsibilities related to erosion and sediment controls at the construction site. Type or print clearly, using ink and not markers or pencil.

NPDES Permit Number TNR \_\_\_\_\_ (Include the NPDES permit number for the site.)

Name of the construction project (site)

**Pickle Creek Plaza – Phase 1**

Street address (or description of location)

**Located between Nashville Hwy (US 44) and Tennessee Avenue (US 19) near Center Street in Anytown.**

Legal name of the construction site operator

**Anytown Good Neighbor Development Corporation**

Mailing address

**459 Some Road, Suite 306**

**Anytown, TN 37XXX-XXXX**

Telephone number and/or e-mail address

**( 123 ) 456-0987**

**Janybody23@agndc.com**

Have the storm water discharges associated with construction activity been eliminated? ☐ Yes ☐ No

If YES, provide the date at which the construction site was finally stabilized.

Construction activities at the site continue, but my responsibilities with respect to the construction activities have ceased. ☐ Yes ☐ No

If YES, provide the name, mailing address and telephone number of any new operators (for instance, an operator who has taken over your responsibilities) involved with soil disturbance at the construction site.

**Certification and Signature (must be signed by President, Vice President or equivalent, or ranking elected official)**

I certify under penalty of law that either: (a) all storm water discharges associated with construction activity from the portion of the identified facility where I was an operator have ceased or have been eliminated or (b) I am no longer an operator at the construction site. I understand that by submitting this notice of termination, I am no longer authorized to discharge storm water associated with construction activity under this general permit, and that discharging pollutants in storm water associated with construction activity to waters of the United States is unlawful under the Clean Water Act where the discharge is not authorized by a NPDES permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act.

For the purposes of this certification, elimination of storm water discharges associated with construction activity means that all disturbed soils at the portion of the construction site where the operator had control have been finally stabilized and temporary erosion and sediment control measures have been removed or will be removed at an appropriate time to insure final stabilization is maintained, or that all storm water discharges associated with construction activities from the identified site that are authorized by a NPDES general permit have otherwise been eliminated from the portion of the construction site where the operator had control.

Printed name (construction site operator)

Signature

Date

Permittees who are presently covered under the Tennessee General NPDES Permit to Discharge Storm Water Associated with Construction Activity must submit a Notice of Termination after completion of their construction activities and final stabilization of their portion of the site, or within 30 days after another operator has taken over all of their responsibilities at the site. A permittee cannot submit a NOT without final stabilization unless another party has agreed to assume responsibility for final stabilization of the site. A completed NOT form should be submitted to the local Division of Water Pollution Control Office address (see table below), and marked **“Storm Water Notice of Termination.”**

**Environmental Assistance Centers (EACs) - Division of Water Pollution Control - Addresses**  
**EAC Offices may be reached by dialing toll-free 1-888-891-TDEC.**

EAC Office	Street Address	Zip Code	EAC Office	Street Address	Zip Code
Memphis	2510 Mt. Moriah Road STE E-645	38115-1520	Cookeville	1221 South Willow Ave.	38506
Jackson	362 Carriage House Drive	38305-2222	Chattanooga	540 McCallie Avenue STE 550	37402-2013
Nashville	537 Brick Church Park Drive	37243-1550	Knoxville	2700 Middlebrook Pike STE 220	37921
Columbia	2484 Park Plus Drive	38401	Johnson City	2305 Silverdale Road	37601

## **Appendix C**

### **Inspection Report**

To be submitted to the local EAC every quarter.





Department of Environment and Conservation  
Division of Water Pollution Control

## Construction Storm Water Inspection Report

(This form is required only for discharges into siltation-impaired streams and into high quality waters.)

### Construction Site Information

NPDES Permit No. TNR \_\_\_\_\_ Notice of Coverage (NOC) Date \_\_\_\_\_ County \_\_\_\_\_

Name of Project **PICKLE CREEK PLAZA – PHASE 1**

Developer and/or Contractor Name **ANYTOWN GOOD NEIGHBOR DEVELOPMENT CORPORATION**

Outfall No. \_\_\_\_\_ (or station no. or other identifier of drainage area represented)

Month/Year	Week 1	Week 2	Week 3	Week 4	Week 5
	<i>Yes or No / Initials</i>	<i>Yes or No / Initials</i>	<i>Yes or No / Initials</i>	<i>Yes or No / Initials</i>	<i>Yes or No / Initials</i>
January, _____	Date:	Date:	Date:	Date:	Date:
Inspections Performed	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
E&S Controls in Order	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
February, _____	Date:	Date:	Date:	Date:	Date:
Inspections Performed	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
E&S Controls in Order	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
March, _____	Date:	Date:	Date:	Date:	Date:
Inspections Performed	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
E&S Controls in Order	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
April, _____	Date:	Date:	Date:	Date:	Date:
Inspections Performed	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
E&S Controls in Order	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
May, _____	Date:	Date:	Date:	Date:	Date:
Inspections Performed	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
E&S Controls in Order	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
June, _____	Date:	Date:	Date:	Date:	Date:
Inspections Performed	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
E&S Controls in Order	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
July, _____	Date:	Date:	Date:	Date:	Date:
Inspections Performed	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
E&S Controls in Order	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
August, _____	Date:	Date:	Date:	Date:	Date:
Inspections Performed	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
E&S Controls in Order	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
September, _____	Date:	Date:	Date:	Date:	Date:
Inspections Performed	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
E&S Controls in Order	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
October, _____	Date:	Date:	Date:	Date:	Date:
Inspections Performed	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>
E&S Controls in Order	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>	<i>Yes or No /</i>

November, _____	Date: _____	Date: _____	Date: _____	Date: _____	Date: _____
Inspections Performed	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /
E&S Controls in Order	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /
December, _____	Date: _____	Date: _____	Date: _____	Date: _____	Date: _____
Inspections Performed	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /
E&S Controls in Order	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /	<i>Yes</i> or <i>No</i> /

Provide the following information for the person(s) who have performed and initialed the above inspections. If more than two persons have performed these inspections, give information for the two persons who performed the most numbers of inspections.

Initials _____	Name _____ Phone No. (_____) _____
Initials _____	Name _____ Phone No. (_____) _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated information presented. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that inspections of storm water discharge points (outfalls) and of erosion and sediment controls have been performed as recorded in the table above. I certify that erosion and sediment controls in the drainage area of the identified outfall were installed as planned and designed and in working order as recorded in the table above. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name _____ Title _____ Signature _____
Company _____ Date _____

## Information and Instructions

- The purpose of this form is to report inspections of storm water discharge points and the condition of erosion and sediment controls (E&S Controls) at the construction site. You are required to complete this form only if discharges from the construction site enter waters listed on the Tennessee 303(d) list for siltation or have been identified as impaired since the last 303(d) list, or enter high quality waters. You can determine whether you are discharging to a listed stream by looking at the Notice of Coverage (NOC) returned to you after you applied for the construction runoff permit. You may also call your local Environmental Assistance Center at the toll-free number of 1-888-891-TDEC.
- You are required to inspect outfall points (where discharges from the site enter streams or wet weather conveyances) to ascertain whether your erosion control measures are effective in preventing soil from leaving the construction site and entering nearby streams. You are also required to inspect the erosion and sediment control measures being used at the site, whether these controls have been installed according to the storm water pollution prevention plan and whether these controls are in working order. These inspections are required at least once per week.
- For each month, space is given for each week of the month, with three boxes for each week. To record the inspections and observations for a week, write the date on which the inspections were performed in the box labeled "Date:." In the boxes below it, circle *Yes* or *No* to indicate if the inspections, both of outfall points and of the erosion and sediment control measures, were performed, and circle *Yes* or *No* to indicate if erosion and sediment controls were in place and in working order. Sign your initials beside the yes or no answers that you give.
- The inspection results shall be submitted (postmarked) by the 15th day of the month following the end of the quarter, to the Environmental Assistance Center responsible for the area of the State where the construction project is located. Quarters are January – March, April – June, July – September, and October - December. Continue to use the same form, submitting it with original signatures each quarter, until the end of the year or until the Notice of Termination is filed.

### Environmental Assistance Centers (EACs) - Division of Water Pollution Control - Addresses

EAC Office	Street Address	Zip Code	EAC Office	Street Address	Zip Code
Memphis	2510 Mt. Moriah Road STE E-645	38115-1520	Cookeville	1221 South Willow Ave.	38506
Jackson	362 Carriage House Drive	38305-2222	Chattanooga	540 McCallie Avenue STE 550	37402-2013
Nashville	711 R S Gass Boulevard	37206	Knoxville	2700 Middlebrook Pike STE 220	37921
Columbia	2484 Park Plus Drive	38401	Johnson City	2305 Silverdale Road	37601

## **Appendix D**

### **Stabilization Plan**

## PERMANENT SEEDING MIXTURES

Seeding Dates	Grass Seed	Percentages
February 1 to July 1	Kentucky 31 Fescue	80%
	Korean Lespedeza	15%
	English Rye	5%
June 1 to August 15	Kentucky 31 Fescue	55%
	English Rye	20%
	Korean Lespedeza	15%
	German Millet	10%
April 15 to August 15	Bermudagrass (hulled)	70%
	Annual Lespedeza	30%
August 1 to December 1	Kentucky 31 Fescue	70%
	English Rye	20%
	White Clover	10%
February 1 to December 1	Kentucky 31 Fescue	70%
	Crown Vetch	25%
	English Rye	5%

## TEMPORARY SEEDING MIXTURES

Seeding Dates	Grass Seed	Percentages
January 1 to May 1	Italian Rye	33%
	Korean Lespedeza	33%
	Summer Oats	34%
May 1 to July 15	Sudan - Sorghum	100%
May 1 to July 15	Starr Millet	100%
July 15 to January 1	Balboa Rye	67%
	Italian Rye	33%

## **Appendix E**

**TR – 55 Worksheets**

## Worksheet 2: Runoff curve number and runoff

Project	By	Date
Location	Checked	Date

Check one: ☐ Present ☐ Developed

### 1. Runoff curve number

Soil name and hydrologic group (appendix A)	Cover description  (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN <sup>1/</sup>			Area  <input type="checkbox"/> acres <input type="checkbox"/> mi <sup>2</sup> <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Figure 2-3	Figure 2-4		

<sup>1/</sup> Use only one CN source per line

**Totals** ➡

CN (weighted) =  $\frac{\text{total product}}{\text{total area}}$  = \_\_\_\_\_ = \_\_\_\_\_ ;
 
**Use CN** ➡

### 2. Runoff

	Storm #1	Storm #2	Storm #3
Frequency ..... yr			
Rainfall, P (24-hour) ..... in			
Runoff, Q ..... in			

(Use P and CN with table 2-1, figure 2-1, or equations 2-3 and 2-4)

# Worksheet 3: Time of Concentration ( $T_c$ ) or travel time ( $T_t$ )

Project	By	Date
Location	Checked	Date

Check one: ☐ Present ☐ Developed

Check one: ☐  $T_c$  ☐  $T_t$  through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.  
Include a map, schematic, or description of flow segments.

## Sheet flow (Applicable to $T_c$ only)

	Segment ID
1. Surface description (table 3-1) .....	
2. Manning's roughness coefficient, n (table 3-1) .....	
3. Flow length, L (total L $\geq$ 300 ft) ..... ft	
4. Two-year 24-hour rainfall, $P_2$ ..... in	
5. Land slope, s ..... ft/ft	
6. $T_t = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute $T_t$ ..... hr	

+ =

## Shallow concentrated flow

	Segment ID
7. Surface description (paved or unpaved) .....	
8. Flow length, L ..... ft	
9. Watercourse slope, s ..... ft/ft	
10. Average velocity, V (figure 3-1) ..... ft/s	
11. $T_t = \frac{L}{3600 V}$ Compute $T_t$ ..... hr	

+ =

## Channel flow

	Segment ID
12. Cross sectional flow area, a ..... ft <sup>2</sup>	
13. Wetted perimeter, $p_w$ ..... ft	
14. Hydraulic radius, $r = \frac{a}{p_w}$ Compute r ..... ft	
15. Channel slope, s ..... ft/ft	
16. Manning's roughness coefficient, n .....	
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V ..... ft/s	
18. Flow length, L ..... ft	
19. $T_t = \frac{L}{3600 V}$ Compute $T_t$ ..... hr	
20. Watershed or subarea $T_c$ or $T_t$ (add $T_t$ in steps 6, 11, and 19) ..... Hr	

+ =

## Worksheet 4: Graphical Peak Discharge method

Project	By	Date
Location	Checked	Date

Check one: ☐ Present ☐ Developed

### 1. Data

Drainage area .....  $A_m =$  .....  $\text{mi}^2$  (acres/640)

Runoff curve number .....  $CN =$  ..... (From worksheet 2)

Time of concentration .....  $T_c =$  ..... hr (From worksheet 3)

Rainfall distribution ..... = ..... (I, IA, II III)

Pond and swamp areas spread throughout watershed ..... = ..... percent of  $A_m$  ( ..... acres or  $\text{mi}^2$  covered)

2. Frequency ..... yr

3. Rainfall, P (24-hour) ..... in

Storm #1	Storm #2	Storm #3

4. Initial abstraction,  $I_a$  ..... in  
(Use  $CN$  with table 4-1)

--	--	--

5. Compute  $I_a/P$  .....

--	--	--

6. Unit peak discharge,  $q_u$  ..... csm/in  
(Use  $T_c$  and  $I_a/P$  with exhibit 4- ..... )

--	--	--

7. Runoff,  $Q$  ..... in  
(From worksheet 2) Figure 2-6

--	--	--

8. Pond and swamp adjustment factor,  $F_p$  .....  
(Use percent pond and swamp area with table 4-2. Factor is 1.0 for zero percent pond and swamp area.)

--	--	--

9. Peak discharge,  $q_p$  .....  $\text{ft}^3/\text{s}$

--	--	--

(Where  $q_p = q_u A_m Q F_p$ )



## Worksheet 2: Runoff curve number and runoff

Project PICKLE CREEK PLAZA - Phase I		By JCP		Date 03/01		
Location HWY 44 @ CENTER ST		Checked		Date		
Check one: <input type="checkbox"/> Present <input checked="" type="checkbox"/> Developed						
<b>1. Runoff curve number</b>						
Soil name and hydrologic group (appendix A)	Cover description  (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN <sup>1/</sup>			Area  <input checked="" type="checkbox"/> acres <input type="checkbox"/> mi <sup>2</sup> <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Figure 2-3	Figure 2-4		
C	OPEN SPACE	74			2.83	209.42
C	WOODS	70			3.30	231.0
	IMPERVIOUS	98			4.7	460.60
<sup>1/</sup> Use only one CN source per line <div style="float: right; text-align: right;"> <b>Totals</b> </div>					10.83	901.02
CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{901.02}{10.83} = 83.19$ ; <b>Use CN</b> <div style="border: 1px solid black; display: inline-block; padding: 2px 10px; margin-left: 10px;">83</div>						
<b>2. Runoff</b>						
		Storm #1	Storm #2	Storm #3		
Frequency .....	yr	2	25	100		
Rainfall, P (24-hour) .....	in	3.36	6.5	8.2		
Runoff, Q .....	in	1.74	4.55	6.17		
(Use P and CN with table 2-1, figure 2-1, or equations 2-3 and 2-4)						

# Worksheet 3: Time of Concentration ( $T_C$ ) or travel time ( $T_t$ )

Project PICKLE CREEK PLAZA - Phase I	By JCP	Date 03/01
Location HWY 44 @ CENTER ST	Checked	Date

Check one: ☐ Present ☒ Developed

Check one: ☒  $T_C$  ☐  $T_t$  through subarea

Notes: Space for as many as two segments per flow type can be used for each worksheet.  
 Include a map, schematic, or description of flow segments.

**Sheet flow (Applicable to  $T_C$  only)**

Segment ID 1. Surface description (table 3-1) ..... 2. Manning's roughness coefficient, n (table 3-1) ..... 3. Flow length, L (total L + 300 ft) ..... ft 4. Two-year 24-hour rainfall, $P_2$ ..... in 5. Land slope, s ..... ft/ft 6. $T_t = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute $T_t$ ..... hr	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;">AB</td><td style="width: 50%;"></td></tr> <tr><td>DENSE GRASS</td><td></td></tr> <tr><td>0.24</td><td></td></tr> <tr><td>100</td><td></td></tr> <tr><td>3.36</td><td></td></tr> <tr><td>0.01</td><td></td></tr> <tr> <td style="text-align: center;">0.30</td> <td style="text-align: center;">+ <span style="border: 1px solid black; padding: 2px 10px;"></span> = <span style="border: 1px solid black; padding: 2px 10px;">0.30</span></td> </tr> </table>	AB		DENSE GRASS		0.24		100		3.36		0.01		0.30	+ <span style="border: 1px solid black; padding: 2px 10px;"></span> = <span style="border: 1px solid black; padding: 2px 10px;">0.30</span>
AB															
DENSE GRASS															
0.24															
100															
3.36															
0.01															
0.30	+ <span style="border: 1px solid black; padding: 2px 10px;"></span> = <span style="border: 1px solid black; padding: 2px 10px;">0.30</span>														

**Shallow concentrated flow**

Segment ID 7. Surface description (paved or unpaved) ..... 8. Flow length, L ..... ft 9. Watercourse slope, s ..... ft/ft 10. Average velocity, V (figure 3-1) ..... ft/s 11. $T_t = \frac{L}{3600 V}$ Compute $T_t$ ..... hr	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;">BC</td><td style="width: 50%;"></td></tr> <tr><td>PAVED</td><td></td></tr> <tr><td>200</td><td></td></tr> <tr><td>0.02</td><td></td></tr> <tr><td>2.95</td><td></td></tr> <tr> <td style="text-align: center;">0.02</td> <td style="text-align: center;">+ <span style="border: 1px solid black; padding: 2px 10px;"></span> = <span style="border: 1px solid black; padding: 2px 10px;">0.02</span></td> </tr> </table>	BC		PAVED		200		0.02		2.95		0.02	+ <span style="border: 1px solid black; padding: 2px 10px;"></span> = <span style="border: 1px solid black; padding: 2px 10px;">0.02</span>
BC													
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2.95													
0.02	+ <span style="border: 1px solid black; padding: 2px 10px;"></span> = <span style="border: 1px solid black; padding: 2px 10px;">0.02</span>												

**Channel flow**

Segment ID 12. Cross sectional flow area, a ..... ft <sup>2</sup> 13. Wetted perimeter, $p_w$ ..... ft 14. Hydraulic radius, $r = \frac{a}{p_w}$ Compute r ..... ft 15. Channel slope, s ..... ft/ft 16. Manning's roughness coefficient, n ..... 17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V ..... ft/s 18. Flow length, L ..... ft 19. $T_t = \frac{L}{3600 V}$ Compute $T_t$ ..... hr 20. Watershed or subarea $T_C$ or $T_t$ (add $T_t$ in steps 6, 11, and 19) ..... Hr	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">CD</td> <td style="width: 50%;">DE</td> </tr> <tr><td></td><td>1.5</td></tr> <tr><td></td><td>3.6</td></tr> <tr><td></td><td>0.42</td></tr> <tr><td></td><td>0.0324</td></tr> <tr><td>0.013</td><td>0.033</td></tr> <tr><td>Av. 5.1</td><td>4.55</td></tr> <tr><td>640</td><td>200</td></tr> <tr> <td style="text-align: center;">0.03</td> <td style="text-align: center;">+ <span style="border: 1px solid black; padding: 2px 10px;">0.01</span> = <span style="border: 1px solid black; padding: 2px 10px;">0.04</span></td> </tr> <tr> <td colspan="2" style="text-align: right;">= <span style="border: 1px solid black; padding: 2px 10px;">0.36</span></td> </tr> </table>	CD	DE		1.5		3.6		0.42		0.0324	0.013	0.033	Av. 5.1	4.55	640	200	0.03	+ <span style="border: 1px solid black; padding: 2px 10px;">0.01</span> = <span style="border: 1px solid black; padding: 2px 10px;">0.04</span>	= <span style="border: 1px solid black; padding: 2px 10px;">0.36</span>	
CD	DE																				
	1.5																				
	3.6																				
	0.42																				
	0.0324																				
0.013	0.033																				
Av. 5.1	4.55																				
640	200																				
0.03	+ <span style="border: 1px solid black; padding: 2px 10px;">0.01</span> = <span style="border: 1px solid black; padding: 2px 10px;">0.04</span>																				
= <span style="border: 1px solid black; padding: 2px 10px;">0.36</span>																					

## Worksheet 4: Graphical Peak Discharge method

Project PICKLE CREEK PLAZA - Phase I	By JCP	Date 03/01
Location HWY 44 @ CENTER ST	Checked	Date

Check one: ☐ Present ☒ Developed

**1. Data**

Drainage area .....  $A_m = 0.0169$  mi<sup>2</sup> (acres/640)

Runoff curve number .....  $CN = 83$  (From worksheet 2)

Time of concentration .....  $T_C = 0.36$  hr (From worksheet 3)

Rainfall distribution ..... = II (I, IA, II III)

Pond and swamp areas sprea  
throughout watershed ..... = \_\_\_\_\_ percent of  $A_m$  ( \_\_\_\_\_ acres or mi<sup>2</sup> covered)

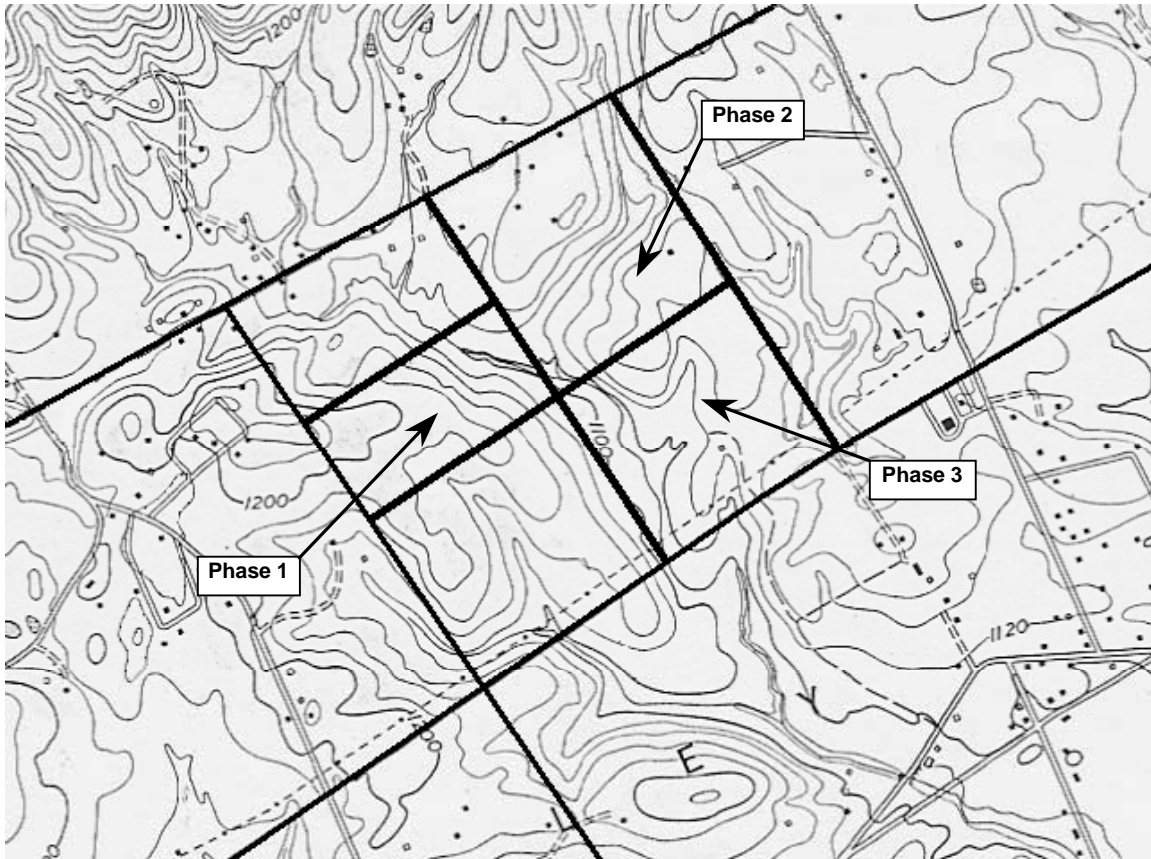
  

	Storm #1	Storm #2	Storm #3
2. Frequency ..... yr	2	25	100
3. Rainfall, P (24-hour) ..... in	3.36	6.5	8.2
4. Initial abstraction, $I_a$ ..... in (Use CN with table 4-1)	0.410	0.410	0.410
5. Compute $I_a/P$ .....	0.122	0.063	0.05
6. Unit peak discharge, $q_u$ ..... csm/in (Use $T_C$ and $I_a/P$ with exhibit 4- _____ )	600	625	625
7. Runoff, Q ..... in (From worksheet 2) Figure 2-6	1.74	4.55	6.17
8. Pond and swamp adjustment factor, $F_p$ ..... (Use percent pond and swamp area with table 4-2. Factor is 1.0 for zero percent pond ans swamp area.)			
9. Peak discharge, $q_p$ ..... ft <sup>3</sup> /s  ( Where $q_p = q_u A_m QF_p$ )	17.6	48.1	65.2

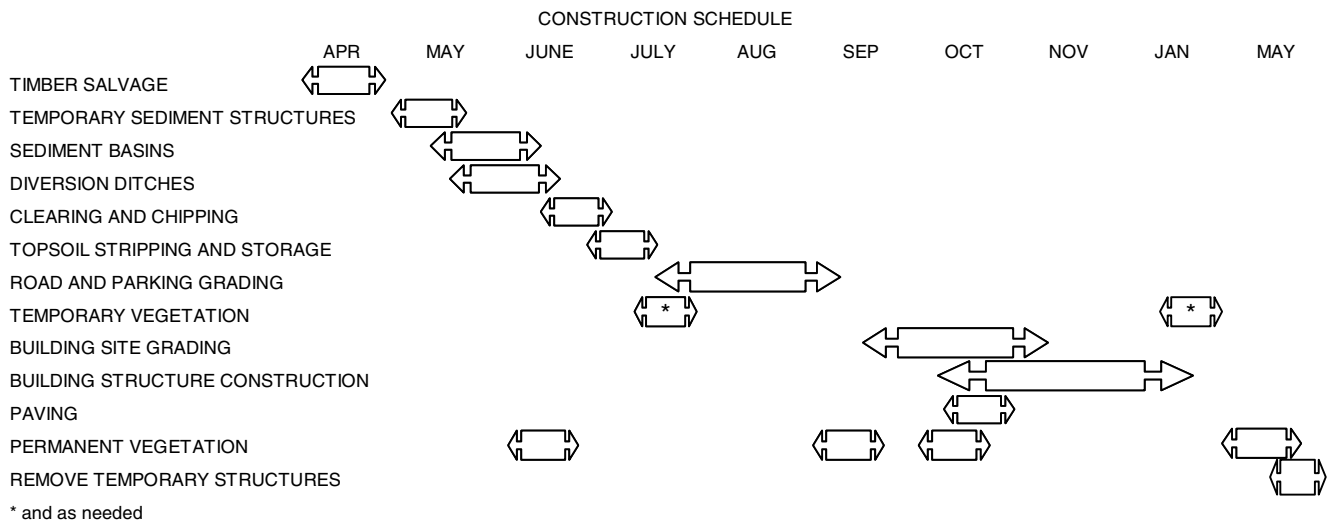
## SITE LOCATION MAP

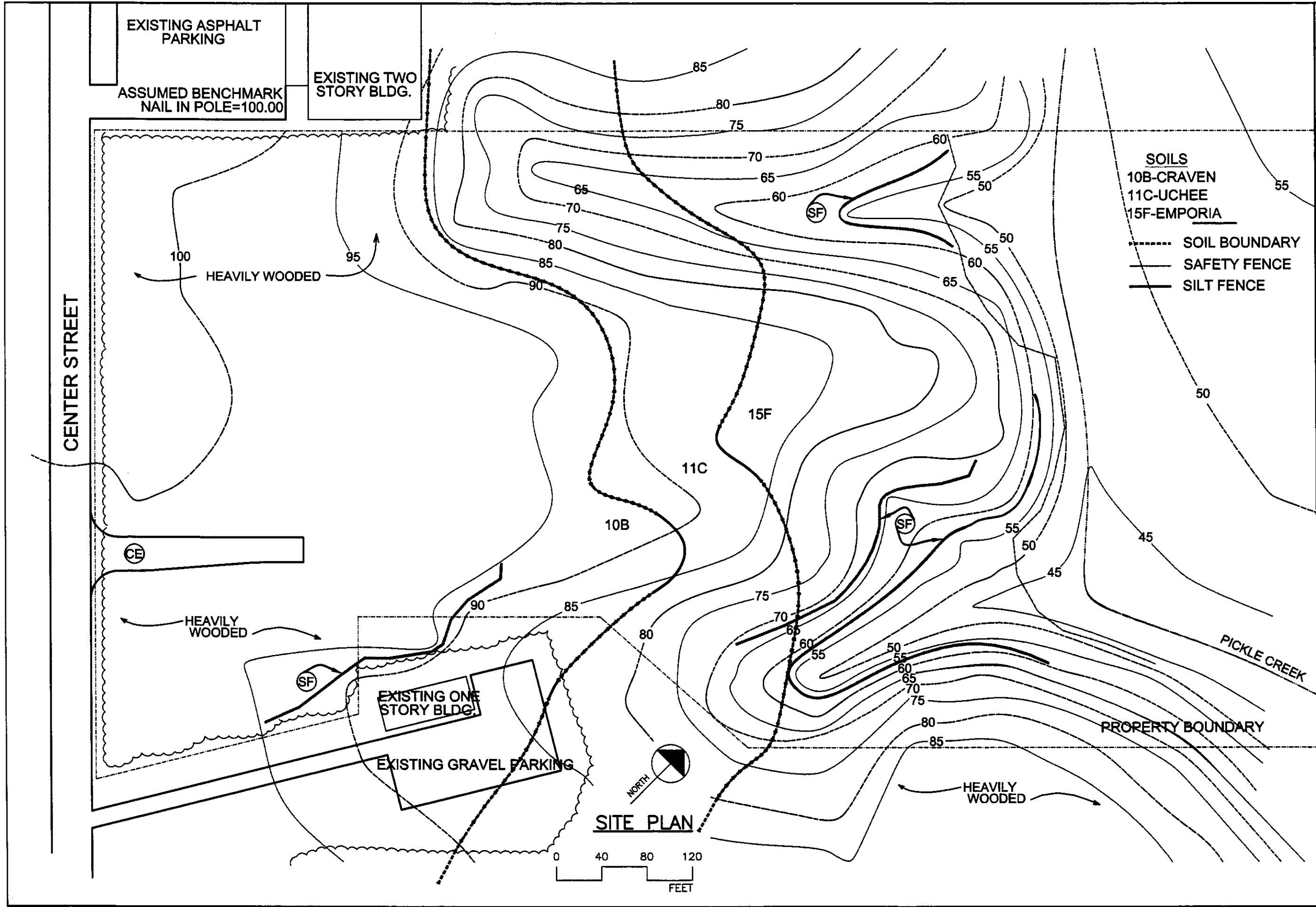
### **PICKLE CREEK PLAZA – PHASE 1** **ANYTOWN GOOD NEIGHBOR DEVELOPMENT CORPORATION**

Any County, Tennessee  
Perry Springs 7.5' USGS Quadrangle  
Latitude: 37.3375 Longitude: -83.34583

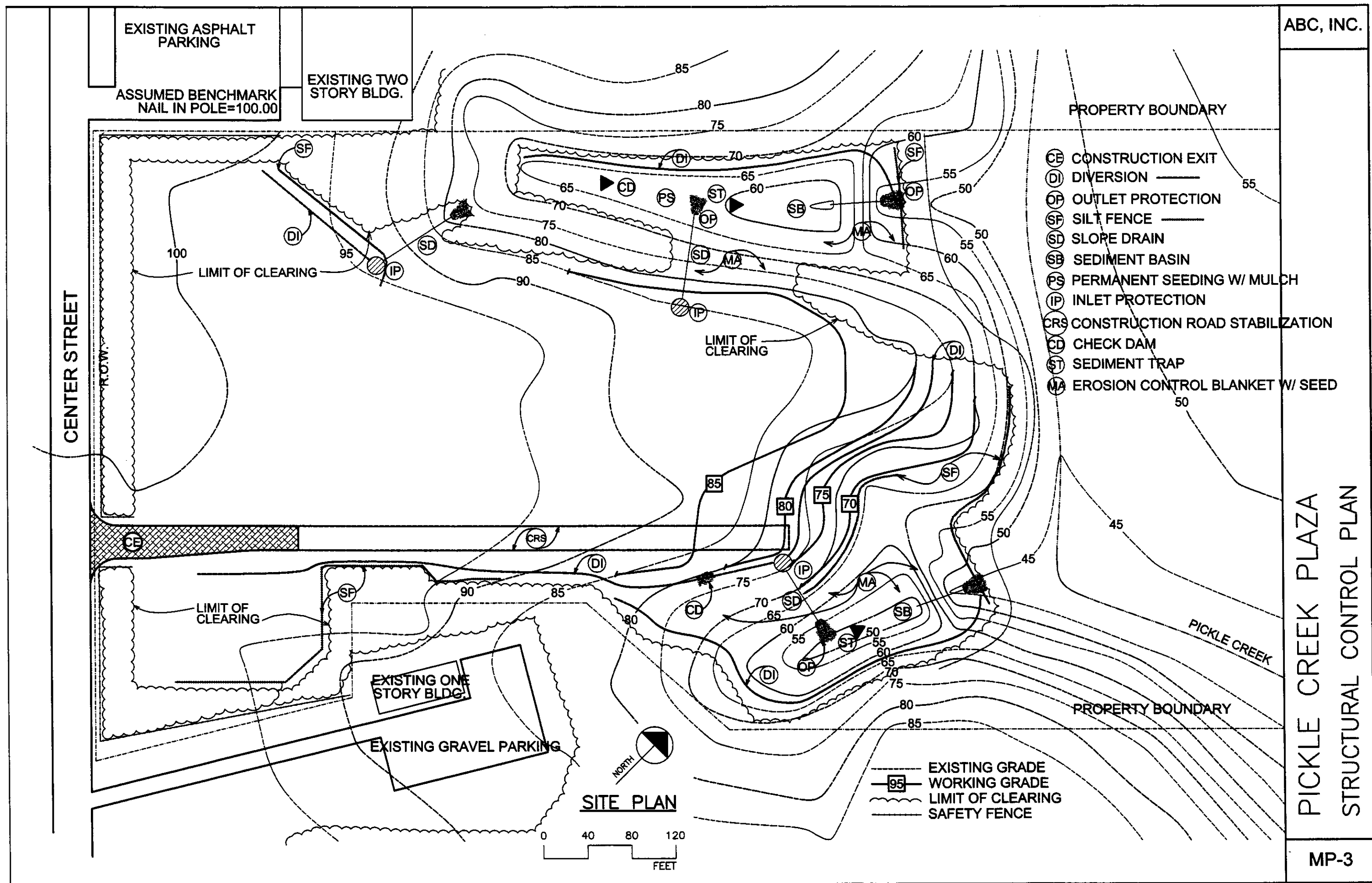


SCALE 1:24,000

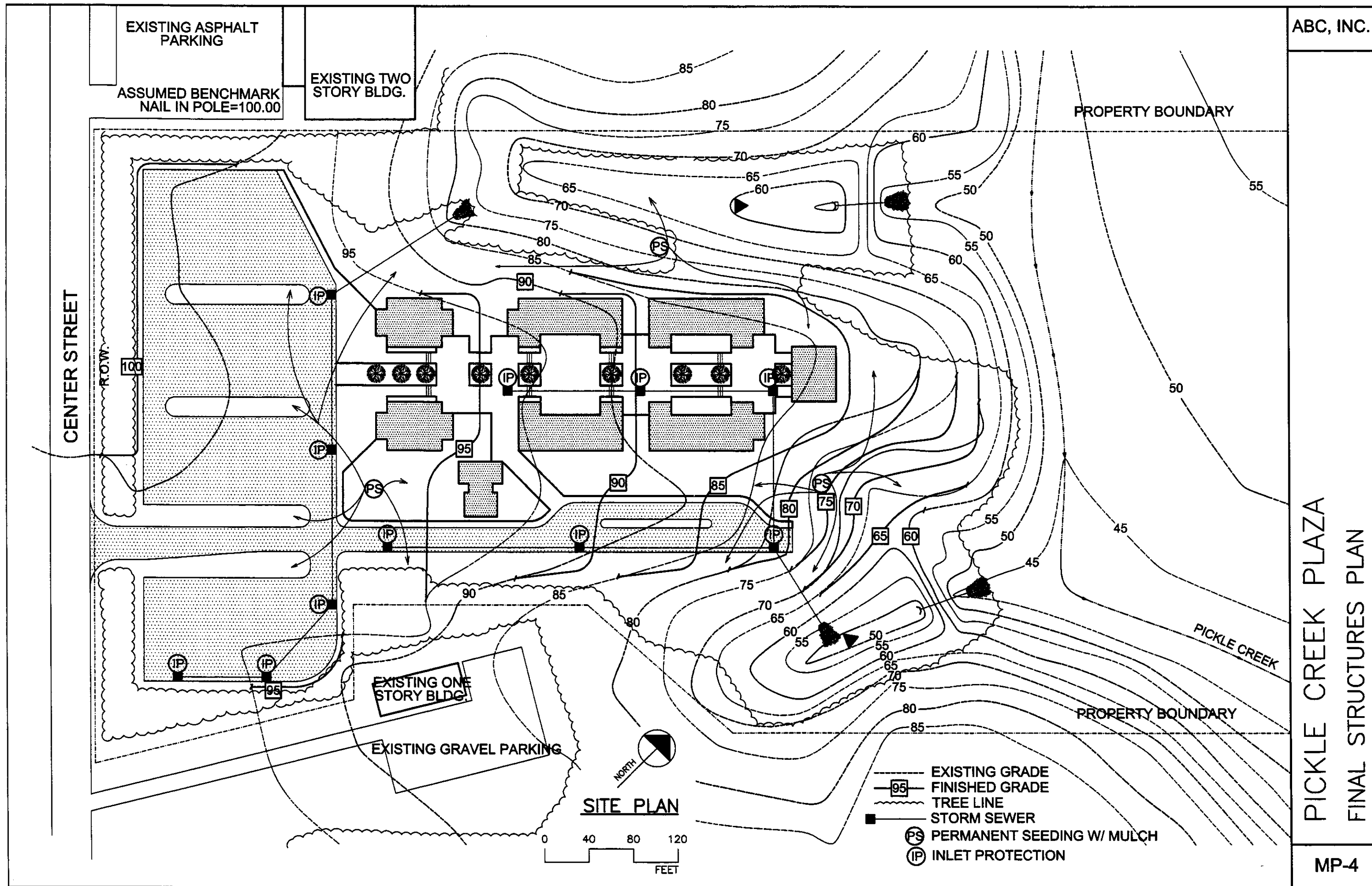




PICKLE CREEK PLAZA  
DRAINAGE/SOIL MAP



PICKLE CREEK PLAZA  
STRUCTURAL CONTROL PLAN



PICKLE CREEK PLAZA  
FINAL STRUCTURES PLAN